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ABSTRACT

This paper discusses the evaluation of 4 of the 12 project sites that are participating in a U.S. Department of Education demonstration program to implement dropout prevention or reentry models that include vocational education as the key intervention strategy. The evaluation study includes the following: (1) identification of factors that affect the extent to which grantees have been able to implement the intended service design; (2) analysis of relationships between project implementation and student outcomes; and (3) consideration of the likelihood of replication of exemplary projects in other localities. Included in the paper are brief descriptions of the four projects, a discussion of the relationships between project implementation and student outcomes for the first 2 years of project operations, and observations concerning the aspects of each project that appear to contribute to positive experiences and outcomes for participants. Three of the four projects are replicating widely known dropout prevention models--two are replications of the High School/Peninsula Academies model and the third is adapting Project COFFEE (Cooperative Federation for Educational Experiences); the fourth is adapting, for at-risk youth, a National Diffusion Network-validated project (GRADS--Guidance in Retraining Adolescent Dropouts), initially developed to serve secondary students with learning disabilities. Some of the student outcomes of the projects include higher grades, more credits earned, fewer courses failed, higher feelings of school affiliation, and more positive student perceptions. Positive outcomes are attributed to alternative schools, smaller school settings, and a more supportive environment. (KC)

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Dropout Prevention in Vocational Education:

Findings from the First Two Years of the Demonstration

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Introduction

In recent years, the U.S. Department of Education (ED) has undertaken a number of initiatives whose purpose is to test strategies for encouraging at-risk youth to remain in school until graduation. One of these initiatives is the Cooperative Demonstration Program funded under the Carl D. Perkins Vocational Education Act. Under this authority, in summer 1989 the Office of Vocational and Adult Education awarded demonstration grants to 10 organizations that proposed to implement dropout prevention or reentry projects that included vocational education as the key intervention strategy. ED also awarded a contract for a longitudinal evaluation of the effects of participation in these projects on students' school persistence, performance, and affiliation. One component of this evaluation is an implementation study, whose activities have included (1) identification of factors that affect the extent to which grantees have been able to implement the intended service design; (2) analysis of relationships between project implementation and student outcomes; and (3) consideration of the likelihood that "exemplary" projects, or components of projects, can be identified that are amenable to adaptation or replication in other localities.

This paper contains a discussion of four of the 12 project sites that are participating in the evaluation. In two of these sites, the evaluation team is implementing random assignment evaluation, while the other two are implementing a comparison group design. Included in the paper are (1) brief descriptions of the four projects, (2) discussion of the relationships between project implementation and student outcomes for the first two years of project operations, and (3) observations concerning the aspects of each project that appear to contribute to positive experiences and outcomes for participants.

The Project Models

Three of the four projects are replicating widely known dropout prevention models: two are replications of the High School/Peninsula Academies model, while the other is adapting Project COFFEE (Cooperative Federation for Educational Experiences). The fourth

is adapting for at-risk youth a National Diffusion Network-validated project initially developed by the grantee to improve the educational experiences and outcomes of secondary students with disabilities. The grantees include the high school district (the two Academies), that first established Academies programs in California, which is implementing a Business Technology Academy in two of the district's eight high schools; a university that is adapting Project COFFEE in three local school districts in the Southeast; and a Child Service Demonstration Center in the Midwest that is cooperating with an area vocational-technical center to adapt the validated model. Three (the Academies and GRADS) of the four projects began serving students in September 1989, while the COFFEE replication first served students in mid-March 1990.[1]

The Business Technology Academies

Following the Academy model, the two Business Technology Academies are organized as a "school-within-a-school." Students enter the Academies at the beginning of tenth grade; capacity is about 50 students per grade, or 150 overall. Students must apply for admission, obtain recommendations from teachers, and have an interview with an Academy teacher. The two Academies in the evaluation target services to students who are moderately at-risk. Because the curriculum is challenging, students must have specified reading achievement levels and demonstrate motivation to succeed in the program. Additionally, the two Academies screen out students with serious emotional or behavioral problems.

Key features of the two Academies include the following:

- Block scheduling of Academy students in English, math, social studies, and business technology courses, with a reduced student-teacher ratio in these classes (students take their other academic courses and electives in the regular school program);

- Assignment of specially trained teachers to the Academy, with these teachers remaining with the students throughout their program; teachers have a reduced

[1]The three that opened in September 1989 had identified a project director in the grant proposals. While the grantee for the COFFEE project had designated a project director, the local sites were scheduled to complete start-up activities during the first semester of school year 1989-90, including hiring staff, and to begin serving students second semester. Thus, the COFFEE project was somewhat late in starting to serve students, but not markedly so (mid-March rather than mid-January).

teaching load in order to provide time for fulfilling Academy responsibilities (e.g., planning of group activities, coordination of academic and vocational components of the program);

- Assignment of a lead teacher to manage the program (In one Academy the business technology teacher fulfills this role. In the other, the initial lead teacher was a business technology teacher; he was replaced by an English teacher for the second year);

- Integration of academic courses with the business technology curriculum;

- Implementation of a mentor program in the 11th grade; most students in both Academies participated in the mentor component, although a few students chose not to participate;

- Paid work experience in a job related to the vocational curriculum during the summer after the 11th grade; students are promised jobs as rewards for acceptable school performance. This component of the program has been less successful than others and less successful than it has been in other Academies, primarily because most students already had part-time jobs that often paid better than the positions identified by the program;

- Employment of an individual to conduct career development activities, including recruitment of business partners and mentors, development of work experience and internship slots, and monitoring of student progress on their jobs (For logistical reasons, this component has been more successful at one of the Academies than at the other);

- Employment of an instructional support specialist who works closely with students and parents to ensure that students attend classes, complete assignments, and obtain tutoring as necessary (This component is in operation at only one of the two Academies);

- Provision of field trips to acquaint students with career opportunities in business technology, expose them to cultural activities, and provide incentives to encourage school affiliation (This component has not been very successful for a variety of reasons having to do with district policies on insurance and staffing of busses for field trips).

COFFEE/OASIS[2]

COFFEE is an abbreviated-day alternative school that integrates academic and vocational instruction to increase the likelihood that participants will complete school and be ready to enter the labor force in good entry-level jobs. The model was initially developed to serve youth identified for special education services on the basis of having severe emotional disturbance. OASIS targets highly at-risk youth, many of whom have been chronic truants with multiple suspensions, have been adjudicated for drug or alcohol-related offenses, have serious personal or family problems, and are seriously behind in their progress to graduation. Only a few OASIS students are identified for special education.

Key features of this COFFEE replication include the following:

- Location in a separate facility away from any of the district's high schools;
- Low student-teacher ratio;
- Teachers who volunteered for the assignment and were selected based on their sensitivity to the problems and needs of highly at-risk youth (The director and at least one teacher are special education-certified);
- Individualized instruction in basic skills and credits needed for graduation;
- Occupational component comprising an entrepreneurial business that constructs and markets picnic furniture and career guidance and employability development activities (The project intended to begin sending students to the area vocational-technical school in the third year);
- A somewhat abbreviated school day, although the school is not actually replicating the COFFEE schedule;
- A counseling component that includes a guidance counselor on staff and considerable encouragement of all staff to provide psychosocial support to students;
- Clear and consistently enforced behavioral requirements;

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[2]The first cohort of students and staff named the COFFEE replication OASIS (Oconee Alternative School is Super) and constructed logo and large sign for placement at the school's entrance.

- Provision of recreational physical activities rather than traditional physical education (This component has had limited success because of district and state requirements).

GRADS[3]

Originally developed to assist students with learning disabilities in improving their academic achievement, GRADS uses prescriptive teachers to adapt instructional materials for students with special learning needs and to train regular school teachers in appropriate instructional methods; provides a resource center comprising a professional staff and computer-managed instructional support; includes affective interventions whose purpose is to improve students' self-concept and school affiliation; and provides inservice training for vocational instructors. The project targets moderately at-risk youth who are still in school; participants attend high school in 11 school districts that are feeders to the area vocational-technical school that houses the GRADS project. Originally intended to target highly at-risk youth, the project was required to modify this goal because youth must be academically eligible to attend the area vocational-technical school in order to participate in the project.

Key components of the project include the following:

- Twice-monthly group counseling for all participants and individual counseling as needed;
- Adaptation of instructional materials for all vocational programs in which participants enroll (includes development of reading-level appropriate workbooks, tests, manuals, and other materials);
- Computerization of vocational curricula to enable students to work on vocational courses in the resource center;
- System of computer-managed assessment, instruction, and feedback in basic vocational and academic skills in the resource center;
- Inservice training and support for vocational instructors to facilitate success with at-risk youth.

[3]Guidance in Retraining Adolescent Dropouts

As these descriptions note, all four projects have implemented a variety of components that, taken together, intend to help youth remain in and succeed in school. Their vocational components differ substantially, with the Academies implementing a business technology curriculum that represents a new, "high tech" generation of the standard business curriculum that many of the nation's high schools used to offer (many still do). In its first two years, OASIS did not offer "standard" vocational education but did initiate an entrepreneurial business as the COFFEE model specifies, with the intent to teach students employability skills and some vocational skills (constructing picnic furniture), as well as management, marketing, and customer relations skills. GRADS students have access to the full range of vocational programs offered at the area vocational-technical school, from cosmetology to welding to motorcycle mechanics, and participants were enrolled in most of these programs.

The Academies and OASIS provide the academic curriculum in smaller classes, with a focus on individualized instruction and extra assistance as needed for students to succeed in these classes. The Academies place considerable emphasis on coordinating academic and vocational activities, and teachers collaborate in working out lessons and activities that will integrate academic and vocational components. GRADS provides basic skills assistance in the resource center for students who need support but does not specifically offer an academic component. Finally, all four projects emphasize psychosocial aspects: OASIS and the Academies have tried to create a close-knit, nurturing environment in which students can identify with their peers and adults, and GRADS provides formal group counseling as well as ongoing support through the resource center and individual counseling support as needed.

All four projects have experienced considerable success in implementing their designs. While each has experienced some problems (staff turnover, delays in delivery of equipment that resulted in postponement of certain activities, or modifications to accommodate district or state requirements), all four sites, at least by school year 1990-91, were operating the service designs they intended to implement. The effects of these designs on students are summarized in the following section.

Student Experiences and Outcomes

As noted previously, all four projects began serving students in school year 1989-90, and the evaluation has collected performance and other information on project participants for school years 1989-90 and 1990-91. Additionally, evaluation staff have made visits to the projects twice each year to observe project activities, discuss the experiences of project staff in implementing these models, and investigate aspects of the projects that seem to yield positive effects in terms of improving the school experiences and outcomes of participants. Table 1 provides a summary of the student-related outcomes reported for these four projects during their first two years. In this section, we discuss some of the characteristics of each project that may help to explain these outcomes.

The Business Academies

Students at Business Technology Academy 1 improved their school performance during their first two years in the Academy. For both years, they earned more credits, had higher GPAs, and failed fewer courses. In 1990-91, they also improved their attendance. Additionally, participants' perceptions of their school experiences resulted in some changes in school affiliation. During 1989-90, for example, they perceived the school environment as safer, that their teachers and instruction were better, and that their classmates had more diverse friendships. In 1990-91, they continued to perceive teaching and teachers as better; additionally, they viewed discipline as fairer and rules as less strict.

The Academy's school-within-a-school model, which emphasizes smaller classes, more coordination among teachers in working with individual students, increased attention to students' day-to-day progress among teachers and particularly from this project's counselor/monitor (who carefully tracks attendance and performance in the classroom, often interacting with parents on these issues), and provision of tutorial assistance, may help to account for these findings. Additionally, block scheduling of classes, in which students remain with their classmates and a core set of teachers for most of their school day over three years, may have contributed to students' improving affiliation with school.

Table 1
Summary of Findings
School Years 1989-90 and 1990-91

SITE/MEASURE	GRADS		OASIS/COFFEE		Bus. Academy 1		Bus. Academy 2	
	1989-90	1990-91	1989-90	1990-91	1989-90	1990-91	1989-90	1990-91
School performance								
Higher GPA	X	X		X	X	X	X	X
Higher number of credits earned	X	X			X			
Fewer absences				X		X		
Fewer courses failed	X	X			X	X	X	-X
School affiliation								
School thought safer	-X			-X	X		X	
Teaching/teachers better			X	X	X	X	X	X
Discipline fairer			X	X	-X	X	X	
More school spirit	X	X					X	X
Rules less strict	-X	X	X			X	X	
Better job preparation			X	X			X	X
Counseling/counselors better			X					
More help choosing courses	-X	X	X	X				X
More academic encouragement	-X	X		X			X	
Student perceptions that:								
Classmates have diverse friendships					X	-X	-X	
Fewer classmates are critical				X		X	X	
Classmates should not misbehave				X				
Future expectations are better		-X				-X		X
Many classmates are college bound						X	X	

X = significant positive effect; -X = significant negative effect

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Academy 2 students also improved their performance over the two-year period, although these improvements were less marked that were those reported for Academy 1. While students improved their GPA for both years, in school year 1989-90 this was the only academic outcome with a significantly positive outcome. Participants' school affiliation increased over both school years. In 1989-90, students' perceptions improved on the following outcomes: school safety, appropriateness of discipline, school spirit, quality of teachers and teaching, academic encouragement, and quality of job preparation. In 1990-91, school affiliation was positive along the following dimensions: quality of teachers and teaching, school spirit, job preparation, assistance in selecting courses, and expectations for the future.

As with Academy 1, the intervention stresses a smaller, more cohesive environment for participants, with substantially more attention, and also higher expectations, from adults than many of these students have experienced in the past. Several of the Academy teachers spend a great deal of their own time, in addition to their school time, with their students, taking them to plays and other activities, talking with them about problems and interests, and treating them with considerable respect and understanding. These aspects of the project may help to explain our findings. It should be noted, however, that improvements in school affiliation or perceptions about one's classmates do not necessarily translate quickly into improved performance. Particularly at Academy 2, improvement in educational performance over the first two years has been limited.

OASIS

As noted earlier, this project began serving students toward the end of the school year; as a consequence, students were exposed to the intervention for a short period during school year 1989-90. The fact that most participants were very seriously deficient academically at that point, combined with the typical instructional winding down that occurs at the end of the academic year, helps to explain the lack of school performance outcomes among project participants. Analyses of performance data failed to show any improvement in any of the academic areas in any of the analyses. During school year 1990-91, however, these students

began to show improvements. They improved significantly in school attendance, and made significant improvements in GPA.

Perhaps most striking about this project was its immediate success in improving participants' feelings about school and the school environment during the first few months of operations. As shown, participants' improved school affiliation is reflected in a number of outcomes. They viewed their teachers and instruction, and counselors and counseling, as better than they had previously experienced. Analyses also showed an increase in the perception that high school prepared students to perform entry-level tasks in their chosen occupational field, that they received adequate help in choosing courses, and that discipline was increasingly fair. These improvements in affiliation and perceptions carried over to school year 1990-91, with students showing positive outcomes on teachers and teaching, fairness of discipline, job preparation, help in choosing courses, and increased academic encouragement. Strikingly, given the relatively disaffection of many of these students, they perceived that fewer of their classmates were critical and that classmates should not be disruptive in class.

In light of the severity of the school-related and personal problems experienced by many of the students at OASIS, the outcomes reported for the project are noteworthy. The early improvement in school affiliation carried over into the project's first full year of services, and students began to show improvement in their academic performance.

GRADS

GRADS participants who attended the area vocational-technical school for one-half of each school day experienced improvements in school performance (credits, GPA, and reduction in number of courses failed) in both school years. In the second year, students also improved in school affiliation (school spirit, rules, help in choosing courses, and encouragement). Interestingly, in school year 1990-91, students were significantly less likely to indicate that their future expectations were better. However, given the inclusion of plans to attend college in this variable, the finding may be explained by the fact that students were encouraged in their counseling groups to develop more realistic expectations about their postschool options. The fact that school affiliation appeared to improve in the second year of

the project but not in the first year may be attributable to improved implementation of the counseling and other support components of the project during school year 1990-91. During school year 1989-90, many vocational instructors refused to send their students to counseling sessions or to the resource center; by the beginning of the second year, however, most instructors had become more supportive of the project and were cooperating more fully in its service design. To the extent that affiliation outcomes are associated with these project components, then this improved cooperation may help to explain student outcomes.

What Works

All three project models considered in this paper--the Academy, COFFEE, and GRADS (as the Developer Demonstrator project for students with learning disabilities) have in the past been shown to have success in meeting the educational needs of at-risk adolescents. Our findings on the projects' effects on students during their first two years are consistent with earlier findings, in that all four demonstrated improvements in school affiliation among participants relative to comparison/control students and their schools' "average" students. Additionally, all four demonstrated at least some improvement in educational performance. These findings suggest that at least potentially, all three models are worth considering by individuals interested in improving the educational experiences and outcomes of at-risk high school aged youth. More specifically, it is interesting to consider what specific components of the models may be more efficacious in light of reported student outcomes, and what aspects of their implementation may help to explain our findings.

The Academy model has a number of features that appear to work particularly well with youth who are at risk owing to disaffection with school, personal or family problems, lack of focus, and other factors but who do have the academic achievement levels and at least potentially the motivation to succeed. These students benefit in the Academy environment from being members of a smaller group, where they can begin to relate to their peers as equals, experience some academic and social success, develop better self-esteem, and then begin to increase their own expectations for themselves both in school and beyond. The combination of a nurturing environment and clear, high behavioral and academic expectations,

along with varied incentives and rewards, appears to help these students become more affiliated with school and hence more likely to graduate. The Academy's strategy to gain the reputation as "special," a program that is desirable to participate in, helps to foster participants' sense of competence and self-confidence.

Our findings indicate that one of the Academy programs has so far experienced more success in terms of academic outcomes than has the other. Onsite observations and discussions suggest that the reason for this difference is the presence in Academy 1 of a staff member who serves a counselor/monitor function. This person lives in the community from which many of the Academy's students are drawn. She knows their parents, and knows many of the students as well. Since joining the program in spring 1990, she has become very proactive in monitoring students. She goes into classrooms to observe behavior, checks on students who have been cutting classes, has students in for counseling on these problems, identifies students who need tutoring and arranges help, and communicates regularly with parents by telephone and school conferences. The addition of this role to the traditional Academy structure appears to have had a salutary effect on the experiences and outcomes of Academy 1's students. Districts interested in replicating or adapting the Academy model should consider spending resources to employ this type of staff member along with the other members of the Academy team.

As noted earlier, OASIS, a COFFEE replication/adaptation that is relatively faithful to the model, targets highly at-risk students--those for whom the alternative school is probably a "last chance" situation. Staff of the school commented that students have experienced some stigma from their former classmates at the area's regular high schools. Nevertheless, in the view of the Director, these students are "so desperate" that they are willing to endure the stigma and ridicule in order to try an educational alternative that may work for them.

Given the complexity of the participants' situations, OASIS has experienced considerable early success with its students. Of particular note is the improvement in school affiliation, as well as some improvement in performance during the school's first full year of operation (1990-91). Class sizes are quite small; teachers and other staff were carefully screened to ensure their understanding of and sensitivity to at-risk youth. Some of the teachers are certified in special education and have worked with adolescents with severe

emotional problems; at least one is a former dropout. The school's Director places strong emphasis on communication with students; he spends a majority of his time in individual counseling sessions with students. This and other supportive activities focus on students' psychosocial needs, based on the notion that these youth cannot really focus on school until some of their personal issues are under control. Care has been taken to ensure that all students understand the school's expectations regarding behavior and performance. The component of this project that seems to work is the focus on the multiple needs of participants. This emphasis includes considerable individualized instruction in class, including use of nontraditional instructional methods; strong counseling and psychosocial support components; and willingness to assist students with their personal issues as a strategy for winning them back to school.

GRADS places strong emphasis on students' personal needs as well, including regularly scheduled group counseling sessions that focus on academic, personal, and career issues and individual counseling and advocacy for students needing this support. Another key component of the project is the revision of instructional materials to accommodate basic skills levels of students. Additionally, these revisions have tended to improve the "learnability" of instructional materials initially developed by vocational instructors who are experts in their occupational areas but who may have limited pedagogical skills or experience. Similarly, computerization of the vocational programs makes individualized self-paced reinforcement of class or lab instruction feasible for all students. The availability of revised and computerized materials in vocational education is important to all students, not just those at risk of dropping out of school, and these components of GRADS are eminently transportable. Additionally, the importance of the counseling component is suggested by the improvement in school affiliation reported for project participants in school year 1990-91.

Implications

Within the constraints of high school environment, which include, for example, increasingly complicated and time-consuming graduation requirements, limited resources to support "special" services for students who are headed toward failure and early departure, and

increasingly rigorous responses to discipline and safety problems, the projects described in the paper have experienced some success in designing and implementing strategies to improve the school experiences and outcomes for at-risk adolescents. Two of the project models aim to change all or most of the school experience. The school-within-a-school creates a smaller, more coherent environment for students on the theory that this environment will facilitate development of self-esteem and motivation while not closing participants out from the activities of the larger school environment (e.g., extracurricular activities) for at least part of the day. These projects succeed to the extent that they become identified as "special" in a positive way and that they develop the right mix of adults who have the skills and commitment to make the experience work for students.

The alternative school also has the advantage of changing the school experience of students who have failed in the regular environment by moving them to another place and then attempting to make that place work for participants. The danger of this strategy is the stigma that many students experience as being "different," or "dumb," or "failures." Even so, as the director of OASIS believes, some youth are willing to endure these stereotypes in order to find an environment in which they can begin to experience success, develop affiliation with their peers and teachers, and eventually persist to graduation.

Finally, projects that address only a part of students' school day can also achieve important positive effects to the extent that they carefully design services to address the particular needs of targeted students. While effects may be slower or smaller, the activities of projects like GRADS help to support students' vocational programs and, if effective, can be expected to improve not only educational outcomes but also postschool employment success.